

REMARKS

The Final Office Action of August 12, 2003 and the Advisory Action of October 30, 2003 have been received and reviewed. Claims 4, 11-15, 23-25 and 27-40 are pending in the application and all pending claims stand rejected. Applicants propose to amend claims 4, 11, 12, 14, 25, 27, 28, 30 and 37-40 as set forth herein. All amendments are made without prejudice or disclaimer. Reconsideration is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 4, 11, 12 and 37-40

Claims 4, 11, 12 and 37-40 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by Xiang et al. Applicants respectfully traverse the rejections as set forth herein.

Specifically, it was thought that “any claim to a nucleic acid which is only limited to comprising the sequences set forth as SEQ ID NO: 1 or 4-7 still encompass the nucleic acids disclosed [in the cited references].” (Final Office Action mailed August 12, 2003, page 4). Although applicants do not agree that claims 4, 11, 12 and 37-40 are anticipated, to expedite prosecution, applicants propose to amend independent claims 4 and 37 in accordance with the suggestion of the Examiner to include the phrase “consisting of.” (*Id.* at page 3). Thus, as proposed to be amended, independent claim 4, claim 40 depending therefrom, independent claim 37 and claims 11, 12 and 38-89 depending therefrom, are not anticipated.

Reconsideration and withdrawal of the anticipation rejections of claims 4, 11, 12 and 37-40 are requested.

Claims 25, 27-36 and 37-39

Claims 25, 27-36 and 37-39 stand rejected under 35 U.S.C. § 102(a) as assertedly being anticipated by Gururajan et al. Applicants respectfully traverse the rejections as set forth herein.

It was thought “because the claims are again directed to nucleic acids comprising (the Office allegedly interprets the phrase “consisting essentially of” as open with regard to nucleic acid sequences) the fragments having defined function, the claims read on any nucleic acid, such as the nucleic acids taught by Gururajan *et al.*, which comprise the sequence disclosed in the

instant application.” (Office Action of February 24, 2003, page 4). Although applicants do not agree that claims 25, 27-36 and 37-39 are anticipated or that the proper standard is being applied, for the sake of expedited prosecution, applicants propose to remove the term “essentially” from independent claim 25 and to amend independent claim 37 to recite in part “a recombinant nucleic acid molecule consisting of SEQ ID NO:1, 4-6 or 7.”

With further regard to claim 37, the Advisory Action indicated “Applicant has not indicated where the originally filed specification teaches a nucleic acid having the limitations of claim 37 … [and that] it is not clear whether claim 37 is directed only to the nucleic acid molecule consisting of SEQ ID NO: 1, 4-6 or 7, which is comprised within a chimeric nucleic acid molecule, or whether the claim is directed to the entire chimeric nucleic acid molecule.” (Advisory Action at p. 2). As proposed to be amended, independent claim 37 recites “[a] recombinant nucleic acid molecule consisting of SEQ ID NO:1, 4-6 or 7.” Support for the amendment to claim 37 is found in the as-filed specification at paragraphs [0030]-[0033]. (See, Specification as-filed, paragraphs [0030]-[0033]). Paragraphs [0030] and [0031] describe SEQ ID NOS: 1, 4-6 and 7, and paragraphs [0032] and [0033] disclose that “a nucleic acid molecule according to the invention” may be within a chimeric gene, which may further be within a vector, which supports the “recombinant nucleic acid molecule” language of claim 37.

Since independent claims 25 and 37, as proposed to be amended, use the transitional phrase “consisting of” in accordance with the suggestion of the Examiner, claims 25, 27-36 and 37-39 are not anticipated. Reconsideration and withdrawal of the anticipation rejections of claims 25, 27-36 and 37-39 are requested.

Rejections under 35 U.S.C. § 103

Claims 13-15, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as assertedly being obvious over Xiang et al. Applicants respectfully traverse the rejections as set forth herein.

Claims 13-15, 23 and 24 all depend, directly or indirectly from claim 37. Accordingly, these claims should be non-obvious as depending, directly or indirectly, from non-obvious independent claim 37. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. (See, *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596

(Fed. Cir. 1988)). Accordingly, reconsideration and withdrawal of the obviousness rejections of claims 13-15, 23 and 24 are requested.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 4, 11-15, 23-25 and 27-40 stand rejected under 35 U.S.C. § 112, second paragraph, as assertedly being indefinite. Applicants respectfully traverse the rejections as hereinafter set forth.

Claims 4, 25 and 37 were thought to be indefinite for use of the term “heterologous.” It was thought that the term “heterologous” was relative and that it’s meaning depended on what the nucleic acid was compared to. (*See, Final Office Action* at page 5). Thus, in the amendment filed October 7, 2003, applicants proposed to amend independent claims 4, 25 and 37 in accordance with the suggestion of the Examiner wherein the term “heterologous” was to be replaced with the term “chimeric.”

In the Advisory Action, it was noted that “[t]he proposed amendments limit the nucleic acid of claims 4 and 25, and claims depending therefrom, to a chimeric nucleic acid molecule consisting of a nucleic acid sequence selected from various disclosed sequences. However, the sequences set forth in the application as SEQ ID NO: 1 and 4-7 are not disclosed as being chimeric. Thus, the proposed amendments raise new issues under 35 U.S.C. § 112, second paragraph.” (*Advisory Action* of October 30, 2003, page 2). Accordingly, applicants propose to remove the phrase “heterologous” from claims 4, 25 and 40. Thus, the indefiniteness issues have been removed.

Claims 27-35 were further thought to be indefinite for being directed to genes, vectors and cells comprising the “nucleic acid sequence of claim 25.” (*See, Id.*). Specifically, it was thought to be unclear “whether applicant intends that the products of the dependent claims comprise only those sequences set forth as SEQ ID NO: 4, 5, and 6 or the entire nucleic acid molecule of claim 10.” (*Id.*). In accordance with the suggestions of the Examiner, applicants propose to amend the relevant portions of claims 27-35 to recite “molecule” in place of “sequence.”

Accordingly, reconsideration and withdrawal of the indefiniteness rejections of claims 4, 11-15, 23-25 and 27-40 are requested.

ENTRY OF AMENDMENTS

The proposed amendments to claims 4, 11, 12, 14, 25, 27, 28, 30 and 37-40 should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search. The amendments should place the application in condition for allowance since they adopt suggestions of the Examiner and comply with issues as to form. Finally, if the Examiner determines that the proposed amendments do not place the application in condition for allowance, entry is respectfully requested since they certainly remove issues for appeal.

CONCLUSION

In view of the proposed amendments and remarks, applicants respectfully submit that the amended claims define patentable subject matter. If questions should remain after consideration of the foregoing, the Examiner is kindly requested to contact applicants' attorney at the address or telephone number given herein.

Respectfully submitted,



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